Aerospace Industries Association Product Support Group

DoD Workshop

for

Modeling & Simulation for Logistics and Sustainment

Highlights of the 2007 OSD/AIA Findings for

Readiness Modeling and Simulation Capability

(Readiness Decision Support System)

1 Sep 09

Background

- 30 Aug 06 AIA meeting with Mr. Pauling, ADUSD-MR&MP, to discuss OSD need for a DOD-wide predictive modeling/analysis capability
- 9 Oct 06 OSD/AIA joint effort initiated
- 5 Dec 06 AIA Product Support Committee provided Mr. Pauling with a viewpoint on a Readiness Decision Support System (RDSS) approach
- Dec 06 – Mar 07 OSD/AIA Working Group activities
- 13 Apr 07 Findings and recommendations presented to Mr. Pauling
- 28 Jun 07 AIA Presentation to Mr. Estevez, ADUSD-MR&MP (Acting) and Prin Asst DUSD-L&MR
- 1 Aug 07 White Paper submitted by AIA to ADUSD-MR&MP

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What We Learned

Vhat's missing from the current process?
rimarily….

A Readiness Decision Support System
Utilizing a Integrated Data Management Proce

Standardized definitions and methods for computing overall Readiness

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The Framework for "***Decision Support System***"

Achieving the Greatest Collective Benefits for the Fleet within Cost & Other Constraints

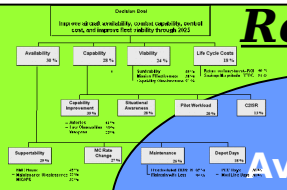
eet Drivers / Problems / Issues / Roadmap

Other Requirements & Constraints

Total Available Funding (by FY and Type)

Enterprise Analysis and Solutions

Readiness Decision Support System (RDSS)



Weighted Decision Criteria & Standards

Availability
Mission Capable Rate
Readiness

Total Ownership Costs

Combat Capability

Other

Data Analysis Scenario Analysis Sensitivity Analysis Portfolio Planning

Balanced Investment Portfolio

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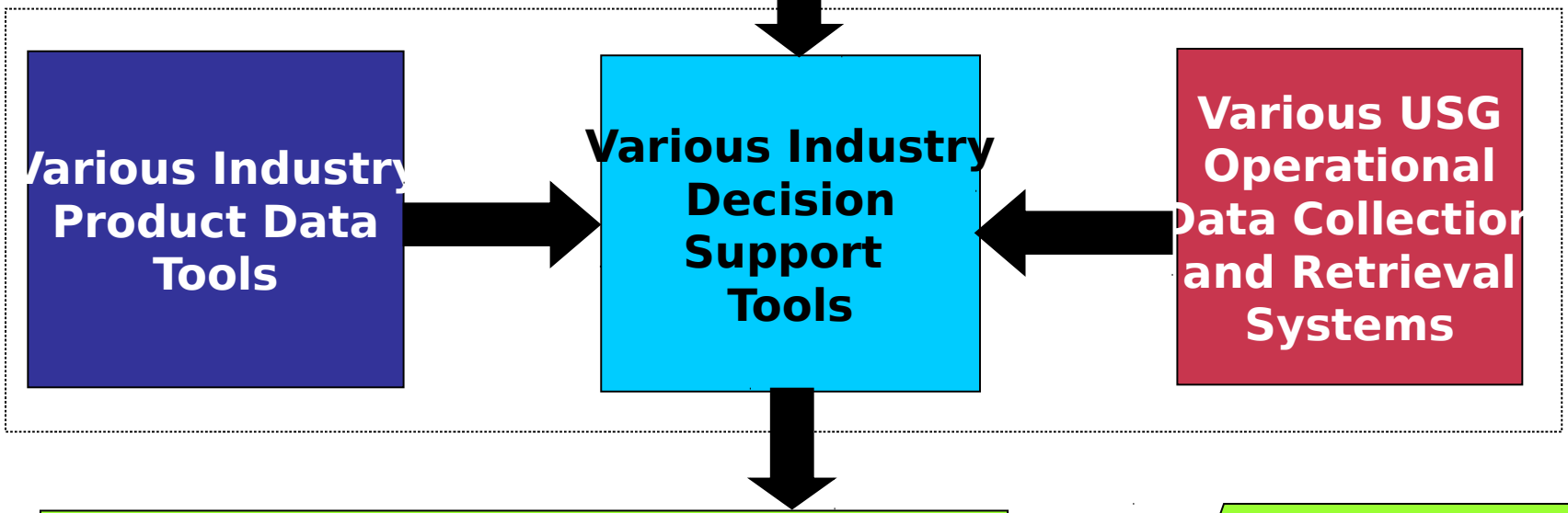
The Challenge……

- Define the Framework
- Define the Required Inputs


Various Industry Product Data Tools
Various Industry Decision Support Tools
Various USG Operational Data Collection and Retrieval Systems

- Define the Outputs
- Develop Methodology to Validate the Outputs

Yields Recommended Readiness Improvements to Be Budgeted

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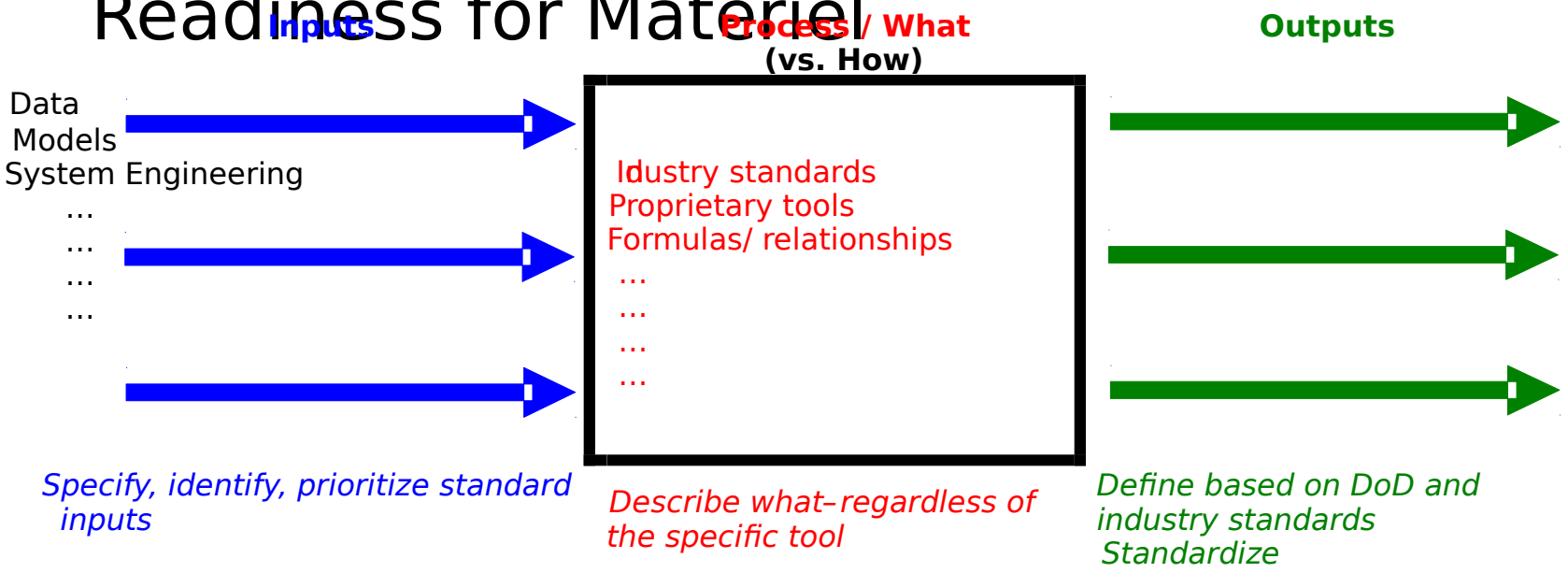
Working Group Focus

- Focus on the OSD top-level perspectives of “Readiness” as captured by the following four OSD Cornerstones of Readiness for Materiel
  - Availability
  - Reliability
  - Mean Down Time
  - Ownership Cost

- Our attention was further focused on the investments that could be made to increase Readiness via changes/improvements to one or more of

Working Group Process

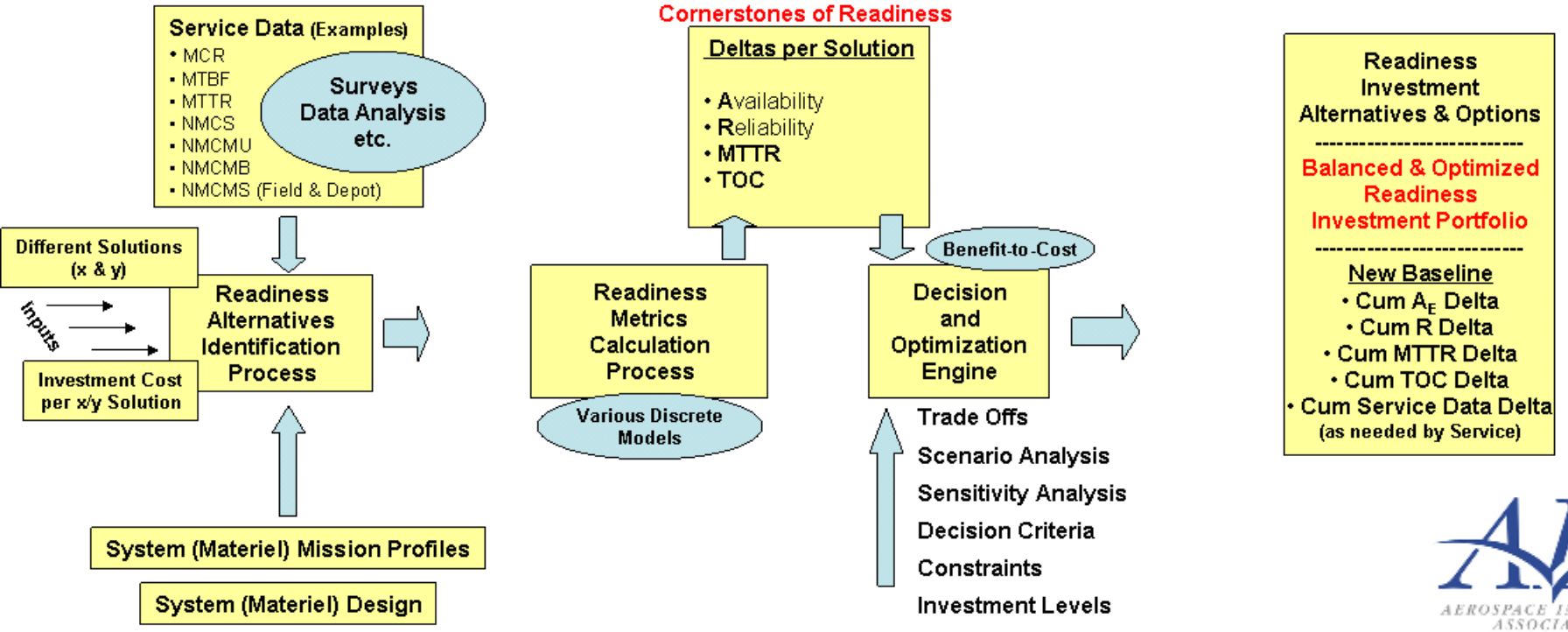
- Worked to establish an Input Process Output (IPO) approach, where outputs related to the OSD Cornerstones of Readiness for Materiel



Example and graphic portraying the essential "process" ingredients of the Phase 1 implementation

Readiness Process Flows

- Baseline current Materials Readiness Status
- Agree on Readiness Improvement [Decision] Objectives
- Identify multiple Alternatives to Improve Readiness
- Collect and Analyze Data (Look at different Scenarios / Decision Sensitivities)
- Assess various 'Delta' Increases in Readiness at different Levels of Investment
- Approve selected 'Readiness Improvement Investment Portfolio' for new Baseline



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Working Group Key Observations, Challenges, and Findings

- What is generally lacking is wide-spread knowledge of the availability of existing Readiness prediction processes and tools

- From the industry materiel design, development and sustainment perspective, there are also restrictive proprietary and licensing issues

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Conclusions and Recommendations

- A two-step implementation approach
  - **PHASE 1:** Get ADUSD-MR&MP vision, objectives, and basic process to the field (industry and DoD) quickly
    - Immediate benefits could be derived
    - Avoids lengthy delays due to likely disagreements on definitions and different Service or industry practices and data structures
    - DoD Reliability, Availability, Maintainability, and Cost Rationale Report Manual – Published 1 June 2009
  - **PHASE 2:** Focus on a precise set of processes, data, and definitions
    - Establish a follow-on joint OSD-AIA Working Group
    - Develop plan / schedule for how Services and Industry can come to agreement on definitions, math of calculations, impacts on existing / legacy data bases and systems, and a more precise taxonomy of the readiness process model functions and attributes
    - OSD provide implementation guide to reference for all contracts involving research and development, manufacture, delivery, and long-term, life cycle support of all materiel, from component through weapon systems

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